

Date:	August 2021	Rev:	XII
No. of Components:	Single		
Mix Ratio by Weight:	N/A		
Specific Gravity:	1.20		
Pot Life:	N/A		
Shelf Life- Bulk:	One year at room temperature		
Shelf Life- Syringe:	One year at room temperature		

Recommended Cure	
Iron-Doped Mercury Flood Lamp	> 30 sec.
100 mW/cm ² @ 240-365 nm	
Alternative Cures*	
Iron-Doped Mercury Spot Lamp	> 5 min.
365nm LED Flood Lamp	> 2.5 min.
Pulsed Mercury Lamp	> 60 sec.
UV Cure is complete after 24 hours from UV Exposure	
* Contact Technical Services for application-specific variations	

NOTES:

- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the Products may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.
- Thermal post-cure beneficial - contact techserv@epotek.com for recommendations.

Product Description: EPO-TEK[®] OG116-31 is a single component, UV curable epoxy adhesive and encapsulant, designed for PCB and circuit assembly applications found in semiconductor, computer, medical, and scientific/OEM industries.

Typical Properties: Cure condition: Varies as required. *denotes test on lot acceptance basis Data below is not guaranteed. To be used as a guide only, not as a specification. Different batches, conditions & applications yield differing results.

PHYSICAL PROPERTIES:			
* Color (before cure):	Cloudy White		
* Consistency:	Viscous Liquid		
* Viscosity (23°C) @ 10 rpm:	20,000-30,000 cPs		
Thixotropic Index:	1.3		
* Glass Transition Temp:	≥115 °C (Dynamic Cure:20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min)		
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	41 x 10 ⁻⁶ in/in°C	
	Above Tg:	170 x 10 ⁻⁶ in/in°C	
Shore D Hardness:	83		
Die Shear:			
	UV Cure	≥10 Kg	3,556 psi
	UV Cure + 23°C/24 Hours	27.8 Kg	9,885.7 psi
	UV Cure + 80°C/1 Hour	27.1 Kg	9,636.8 psi
Degradation Temp:	409 °C		
Weight Loss:	@ 200°C	0.30 %	
	@ 250°C	0.68 %	
	@ 300°C	1.18 %	
Suggested Operating Temperature:	< 300 °C (Intermittent)		
Storage Modulus:	263,581 psi		
* Particle Size:	≤ 20 microns		

OPTICAL PROPERTIES @ 23°C:	
Spectral Transmission:	≥ 96% @ 660-1,640 nm ≥ 92% @ 500 nm
Refractive Index (uncured):	1.5665 @ 589 nm
Refractive Index (cured):	1.5842 @ 589 nm

Epoxyes and Adhesives for Demanding Applications™

This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.

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EPO-TEK[®] OG116-31 Advantages & Suggested Application Notes:

- Viscosity/rheology adapted to high volume syringe needle dispensing with no tailing.
- Versatility in cure. Product responds to a broad range of UV light, and secondary thermal post-curing.
- Suggested applications:
 - ◇ Semiconductor: COB glob top covering IC's and wire bonds; glob top dam; encapsulating and sealing; adhesion to FR4, Kapton, silicon.
 - ◇ Fiber Optic: making fiber optic pigtailed; active alignment of optics; adhesion to many types of glass, metals, ceramics and plastics.
 - ◇ Opto-electronic:
 - Perimeter/main seal for LCD's, compatible with VAN liquid crystal for LCoS devices.
 - Adhesive technology described in Technical Paper # 55 - <http://www.epotek.com/technical-papers.asp>
- High Tg and low outgassing are indicative of its high temperature performance.

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